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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,571	12/05/2003	Kenichi Suenaga	1422-0611P	7359

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EXAMINER	
MARCHESCHI, MICHAEL A	
ART UNIT	**PAPER NUMBER**
1755	

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/727,571	SUENAGA ET AL.	
	Examiner	Art Unit	
	Michael A. Marcheschi	1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) 9-20 is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-8 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 3/5/04, 4/1/04, 7/22/04, 8/5/04
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-8, drawn to polishing composition, classified in class 51, subclass 308.

II. Claims 9-20 drawn to method of polishing, classified in class 216, subclass 89.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed can be used to polish semiconductors.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with John W. Bailey on 7/20/05 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-8 Affirmation of this election must be made by applicant in replying to this Office action. Claims 9-20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the

currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koichi et al. (175).

Koichi et al. teach in the entire document, a polishing composition comprising a mixture of two or more colloidal silica's having different d50 values, wherein the ratio of the two different colloidal silica's in terms of amount and size is defined. It is stated that the mixed silica's have a size of between 10-600 nm. Other variables of the colloidal silica's are defined. Figures 5-6 show frequencies and particle size distributions. Organic acid and peroxide (oxidizer) can be added. The reference also defines a pH for the composition (column 7, lines 28-35 and column 8, lines 1-22)

Although the primary reference fails to literally teach the particulars of formula (1), as defined in claim 1, as can be seen from the frequency and particle sizes defined throughout and in and figures 5-6, it is the examiners position that the values defined and extrapolated from the

figures, when calculated using the claimed formula, encompass the claimed limitations absent evidence to the contrary. This is apparent because the instant claims fail to define any definite frequency values.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshima (789).

Oshima et al. teach in the abstract, and sections [0023]-[0042], a polishing composition comprising a mixture of two or more colloidal silica's, wherein the size of the abrasives is defined in terms of d10, d50 (10-600 nm) and d90 values. It is stated that the mixed silica's have a size of between 10-600 nm. Other variables of the colloidal silica's are defined. An organic phosphonic acid and an oxidizer are also present. The reference also defines a pH for the composition (section [0059]).

Although the primary reference fails to literally teach the particulars of formula (1), as defined in claim 1, as can be seen from the particle sizes defined throughout the reference, it is the examiners position that the values defined and extrapolated from these values, when calculated in terms of a frequency, using the claimed formula, encompass the claimed limitations absent evidence to the contrary. This is apparent because the instant claims fail to define any definite frequency values. All that is definitely defined in the size and since the size can be the same, one can calculate a frequency from claimed formula 1 and therefore, absent any specific frequency, the calculated values reads on the claimed limitations.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ota et al. (711).

Ota et al. teach in the claims, a polishing composition comprising a mixture of two or more colloidal silica's, wherein the size of the abrasives is defined in terms of nanometers. Other variables of the colloidal silica's are defined. Acids can be added.

Although the primary reference fails to literally teach the particulars of formula (1), as defined in claim 1, as can be seen from the particle sizes defined throughout the reference, it is the examiners position that the values defined and extrapolated from these values, when calculated in terms of a frequency, using the claimed formula, encompass the claimed limitations absent evidence to the contrary. This is apparent because the instant claims fail to define any definite frequency values. All that is definitely defined in the size and since the size can be the same, one can calculate a frequency from claimed formula 1 and therefore, absent any specific frequency, the calculated values reads on the claimed limitations.

With respect to the pH, all compositions have a pH which is dependent on the composition and it is the examiners position that since the composition is the same, the claimed pH is apparent absent evidence to the contrary.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takashina et al. (217).

Takashina et al. teach in the abstract, and sections [0036] and [0050]-[0056], a polishing composition comprising colloidal silica having a set size distribution. Other variables of the colloidal silica's are defined. An oxidizing agent and pH adjuster (organic acid) can be added. The reference also defines a pH for the composition.

Although the primary reference fails to literally teach the particulars of formula (1), as defined in claim 1, as can be seen from the particle sizes distribution, it is the examiners position that the values defined and extrapolated from these values, when calculated in terms of a frequency, using the claimed formula, encompass the claimed limitations absent evidence to the contrary. This is apparent because the instant claims fail to define any definite frequency values. All that is definitely defined in the size and since the size can be the same, one can calculate a frequency from claimed formula 1 and therefore, absent any specific frequency, the calculated values reads on the claimed limitations.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshima et al. (146).

Oshima et al. teach in the claims, a polishing composition comprising colloidal silica having a volume frequency defined by the a formula 1 and a formula 2 for a size of 40 nm. Other variables of the colloidal silica's are defined. An oxidizing agent and pH adjuster (organic acid) can be added. Other sizes are apparent (distribution) but they are not literally defined in terms of a volume frequency with a corresponding formula. The reference also defines a pH for the composition.

The reference defines a frequency and particle size and it is the examiners position that the frequencies of the copending application can encompasses the claimed formula 1, especially since the instant claims fail to define any definite frequency values. All that is definitely defined in the size and since the size can be the same, one can calculate a frequency from claimed formula 1 and therefore, absent any specific frequency, the calculated values reads on the

claimed limitations. In the alternative and with respect to other particles sizes defined (but not literally defined in terms of a volume frequency with a corresponding formula), although the reference fails to literally teach the particulars of formula (1), as defined in claim 1, as can be seen from the particle size distribution, it is the examiners position that the values defined and extrapolated from these values, when calculated in terms of a frequency, using the claimed formula, encompass the claimed limitations absent evidence to the contrary. This is apparent because the instant claims fail to define any definite frequency values. All that is definitely defined in the size and since the size can be the same, one can calculate a frequency from claimed formula 1 and therefore, absent any specific frequency, the calculated values reads on the claimed limitations.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-2 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of copending Application No. 10/637,568. Although the conflicting claims are not identical, they are not

patentably distinct from each other because the reduction to practice of the copending claims would render obvious the instant claims.

Although the copending claims fails to literally teach the particulars of formula (1), as defined in claim 1, as can be seen from the particle sizes distribution, it is the examiners position that the values defined and extrapolated from these values, when calculated in terms of a frequency, using the claimed formula, encompass the claimed limitations absent evidence to the contrary. This is apparent because the instant claims fail to define any definite frequency values. All that is definitely defined in the size and since the size can be the same, one can calculate a frequency from claimed formula 1 and therefore, absent any specific frequency, the calculated values reads on the claimed limitations. Finally, the generalization of silica encompasses colloidal silica.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-8 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of copending Application No. 10/726,581. Although the conflicting claims are not identical, they are not patentably distinct from each other because the reduction to practice of the copending claims would render obvious the instant claims. The copending claims define a frequency and particle size and it is the examiners position that the frequencies of the copending application can encompasses the claimed formula 1, especially since the instant claims fail to define any definite frequency values. All that is definitely defined in the size and since the size can be the same, one

can calculate a frequency from claimed formula 1 and therefore, absent any specific frequency, the calculated values reads on the claimed limitations.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-8 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. patent 6,910,952. Although the conflicting claims are not identical, they are not patentably distinct from each other because the reduction to practice of the copending claims would render obvious the instant claims. The copending claims define a frequency and particle size and it is the examiners position that the frequencies of the copending application can encompasses the claimed formula 1, especially since the instant claims fail to define any definite frequency values. All that is definitely defined in the size and since the size can be the same, one can calculate a frequency from claimed formula 1 and therefore, absent any specific frequency, the calculated values reads on the claimed limitations.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

In all of the above rejections, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges

have been held to be a prima facie case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549; *In re Wertheim* 191 USPQ 90 (CCPA 1976).

In view of the teachings as set forth above, it is still the examiners position that the references reasonably teach or suggest the limitations of the rejected claims.

A reference is good not only for what it teaches but also for what one of ordinary skill might reasonably infer from the teachings. *In re Opprecht* 12 USPQ 2d 1235, 1236 (CAFC 1989); *In re Bode* USPQ 12; *In re Lamberti* 192 USPQ 278; *In re Bozek* 163 USPQ 545, 549 (CCPA 1969); *In re Van Mater* 144 USPQ 421; *In re Jacoby* 135 USPQ 317; *In re LeGrice* 133 USPQ 365; *In re Preda* 159 USPQ 342 (CCPA 1968). In addition, "A reference can be used for all it realistically teaches and is not limited to the disclosure in its preferred embodiments" See *In re Van Marter*, 144 USPQ 421.

A generic disclosure renders a claimed species prima facie obvious. *Ex parte George* 21 USPQ 2d 1057, 1060 (BPAI 1991); *In re Woodruff* 16 USPQ 2d 1934; *Merk & Co. v. Biocraft Lab. Inc.* 10 USPQ 2d 1843 (Fed. Cir. 1983); *In re Susi* 169 USPQ 423 (CCPA 1971).

Evidence of unexpected results must be clear and convincing. *In re Lohr* 137 USPQ 548. Evidence of unexpected results must be commensurate in scope with the subject matter claimed. *In re Linder* 173 USPQ 356.

The additional references cited on the 1449 have been reviewed by the examiner and are considered to be art of interest since they are cumulative to or less than the art relied upon in the above rejections.

Any foreign language documents submitted by applicant has been considered to the extent of the short explanation of significance, English abstract or English equivalent, if appropriate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

7/05
MM

Michael A Marcheschi
Primary Examiner
Art Unit 1755